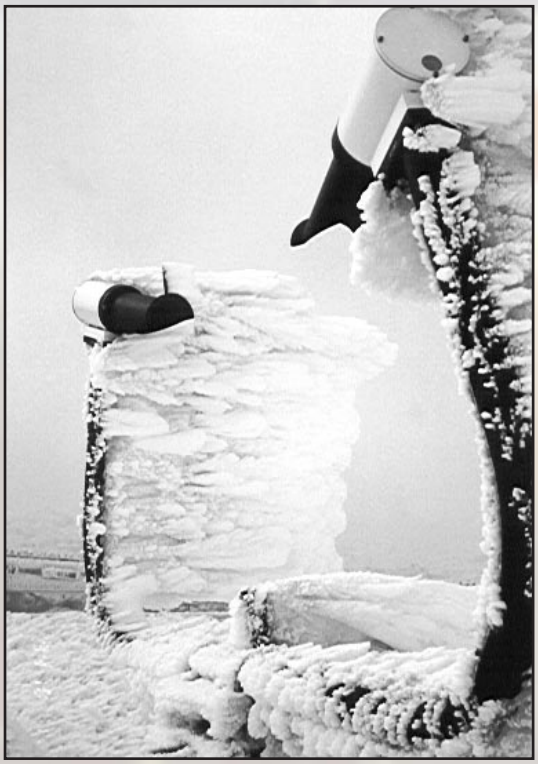
Next Generation Runway Visual Range (RVR)

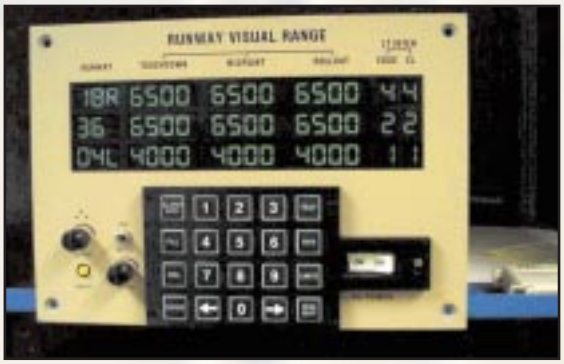
PURPOSE: The New Generation Runway Visual Range (RVR) system was procured to replace fielded obsolete RVR systems, which were becoming difficult to maintain.

In addition to providing a state-of-the-art RVR system, the New Generation RVR also provides operation over the full range of instrument meteorological weather.

BACKGROUND

The RVR system measures visibility, background luminance, and runway light intensity to determine the distance a pilot should be able to see down the runway. This distance, the runway visual range, is used to define the precision landing category of operations. The forward scatter visibility sensor, which measures the amount of light scattered by fog or snow particles, is designed and proven to perform over the full range of instrument meteorological weather.



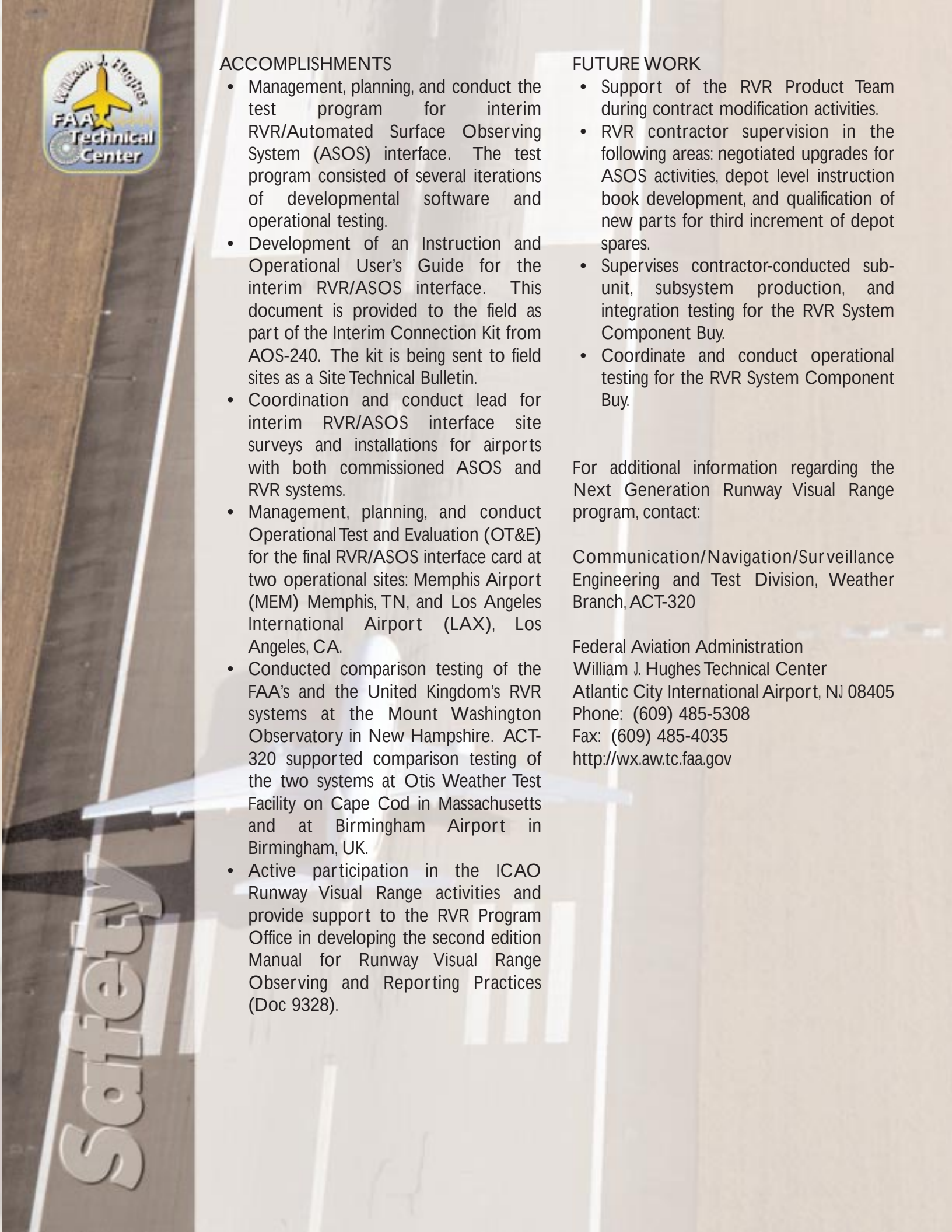


The system measures RVR from 6500 feet to 0 feet in all conditions of fog, snow, and freezing rain. The New Generation RVR system was approved for deployment and commissioned for operational use in the fall of 1995.

The Federal Aviation Administration (FAA) and the United Kingdom's Civil Aviation Authority, through a memorandum of cooperation, have conducted several seasons of comparison testing on the FAA's New Generation RVR system and the UK's Transmissometer-based RVR system. The testing has been carried out at Birmingham Airport in Birmingham, UK, Otis Weather Test Facility in Massachusetts, and the Mount Washington Observatory in New Hampshire. Based on results to date, future studies at the Otis Weather Test Facility may be conducted.

The FAA is participating in the International Civil Aviation Organization's (ICAO) Runway Visual Range Study Group. The study group is charged with developing the second edition of the Manual for Runway Visual Range Observing and Reporting Practices (Doc 9328).

Safety



ACCOMPLISHMENTS

- Management, planning, and conduct the test program for interim RVR/Automated Surface Observing System (ASOS) interface. The test program consisted of several iterations of developmental software and operational testing.
- Development of an Instruction and Operational User's Guide for the interim RVR/ASOS interface. This document is provided to the field as part of the Interim Connection Kit from AOS-240. The kit is being sent to field sites as a Site Technical Bulletin.
- Coordination and conduct lead for interim RVR/ASOS interface site surveys and installations for airports with both commissioned ASOS and RVR systems.
- Management, planning, and conduct Operational Test and Evaluation (OT&E) for the final RVR/ASOS interface card at two operational sites: Memphis Airport (MEM) Memphis, TN, and Los Angeles International Airport (LAX), Los Angeles, CA.
- Conducted comparison testing of the FAA's and the United Kingdom's RVR systems at the Mount Washington Observatory in New Hampshire. ACT-320 supported comparison testing of the two systems at Otis Weather Test Facility on Cape Cod in Massachusetts and at Birmingham Airport in Birmingham, UK.
- Active participation in the ICAO Runway Visual Range activities and provide support to the RVR Program Office in developing the second edition Manual for Runway Visual Range Observing and Reporting Practices (Doc 9328).

FUTURE WORK

- Support of the RVR Product Team during contract modification activities.
- RVR contractor supervision in the following areas: negotiated upgrades for ASOS activities, depot level instruction book development, and qualification of new parts for third increment of depot spares.
- Supervises contractor-conducted sub-unit, subsystem production, and integration testing for the RVR System Component Buy.
- Coordinate and conduct operational testing for the RVR System Component Buy.

For additional information regarding the Next Generation Runway Visual Range program, contact:

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